

A New Species of the Myrmecophilous Genus *Goniusa* (Coleoptera, Staphylinidae, Aleocharinae) from Canada

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Abstract *Goniusa carrorum* sp. nov. is described based on material collected from nests of *Formica obscuripes* FOREL in Alberta, Canada. It is distinguished from the other species of the genus by the wider pronotum, the rounded apical margin of the male tergite VIII, and the truncated apical margin of the male sternite VIII. A diagnostic feature of the genus defined by GUSAROV (2003), male sternite VIII with a broad apical emargination, does not agree with *G. carrorum*, and it should be deleted from the diagnosis of the genus. Additional records for *G. alperti* KISTNER are provided. It was first collected from nests of *Formica oreas* WHEELER (new host record).

Introduction

GUSAROV (2003) revised Nearctic species of the genus *Goniusa* CASEY, 1906, recognizing two species: *G. caseyi* GUSAROV, 2003 (generic type species) and *G. alperti* KISTNER, 1976. Both the species have been known to be associated with ants of the genus *Formica* LINNAEUS, 1758 (Hymenoptera, Formicidae, Formicinae).

Recently, we had the opportunity to study myrmecophilous beetles of the subfamily Aleocharinae housed in the Canadian Forest Service, Laurentian Forestry Centre (LFC). The material revealed one species of *Goniusa* new to science, which is described below.

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Genus *Goniusa* CASEY

Goniusa CASEY, 1906, 348 (original description). — GUSAROV, 2003, 2 (revision).

Notes. GUSAROV (2003) regarded the presence of a broad apical emargination on the male sternite VIII as a diagnostic feature of the genus. However, the present new species does not share this character state. The new species agrees with the diagnosis of the genus in all the other characters mentioned by GUSAROV (2003) and is apparently a member of the genus. Thus, the diagnostic feature, the presence of a broad apical emargination on the male sternite VIII, should be deleted from the diagnosis of the genus.

Goniusa carrorum sp. nov.

Type series. Holotype, ♂, CANADA: Alberta: "Calgary, Alberta / 10. IV 1957 / Lot 1 B.F. & J.L. Carr". Paratypes: same locality and collector as the holotype: 2 ♀♀, 15–IX–1955; 1 ♂, 1 ♀, 1–IX–1956; 3 ♂♂, 1 ♀, 3–III–1957; 1 ♂, 31–III–1957; 1 ♂, 10–IV–1957; 1 ♂, 16–IV–1958; ♂, 20–IV–1970; 3 ♂♂, "Twp. 13 Rge. 14 / W 4 Mer. Alberta / 27. III 1982 / Lot 2 B.F. & J.L. Carr"; 1 ♂, 1 ♀, "Twp. 17 Rge. 14 / W 4 Mer. Alberta / 1. IV 1984 / Lot 1 B.F. & J.L. Carr".

Most specimens are pinned with its host ant. The holotype and most paratypes are deposited in the René Martineau Insectarium, Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, and some paratypes are deposited in the private collection of M. M.

Type locality. Calgary, Alberta, Canada.

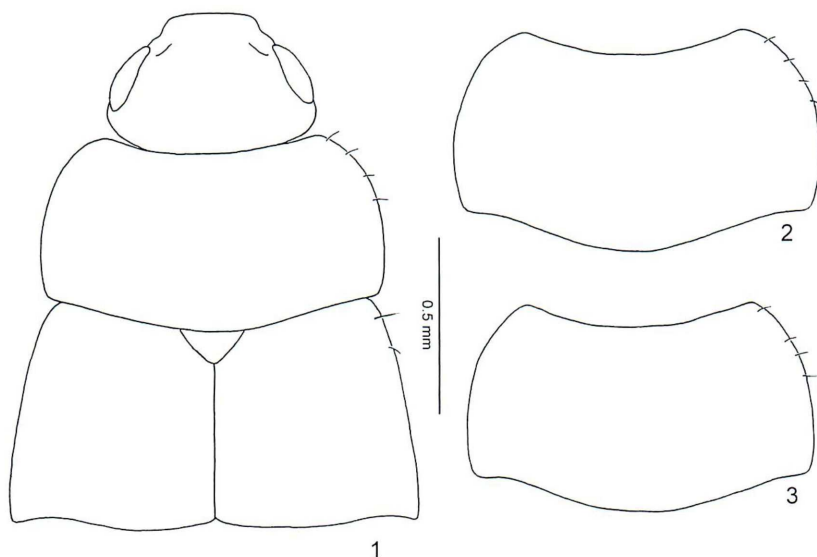
Etymology. Named for Bertha F. and John L. CARR, collectors of the type series.

Symbiotic host. *Formica obscuripes* FOREL, 1886 (*F. rufa* group). Determined by M. M.

Diagnosis. This species may be easily distinguished from the other species of *Goniusa* by the wider pronotum (ratio 1.76–1.80) (ratio 1.5 in *G. caseyi*; 1.6 in *G. alperti*) and the rounded apical margin of the male tergite VIII (slightly crenulated and truncated in the other species) and the truncated apical margin of male sternite VIII (broadly emarginate in the other species). The shape of the median lobe of *G. carrorum* is also different from those of the other species and somewhat intermediate between them. The spermatheca is very similar in shape to those of the other species.

Description. Body reddish brown; head and borders of abdominal segments IV–VI brown; mouthparts, antennae, elytra and legs yellowish brown.

Head (Fig. 1) transverse (HW/HL=1.20–1.21), widest at temples, gently convex above; surface moderately covered with short recumbent setae, and with weak isodiametric microsculpture. Antennae short, somewhat shorter than head and pronotum combined; antennomere I much longer than II; antennomere II almost as long as III; antennomeres IV–X slightly transverse; antennomeres XI very long, longer than I; relative lengths of antennomeres from basal to apical:— 11: 7.5: 7: 4: 4: 4: 4: 4.5: 5: 5:



Figs. 1–3. *Goniusa carrorum* sp. nov.; 1, forebody; 2, 3, shape variations of pronota.

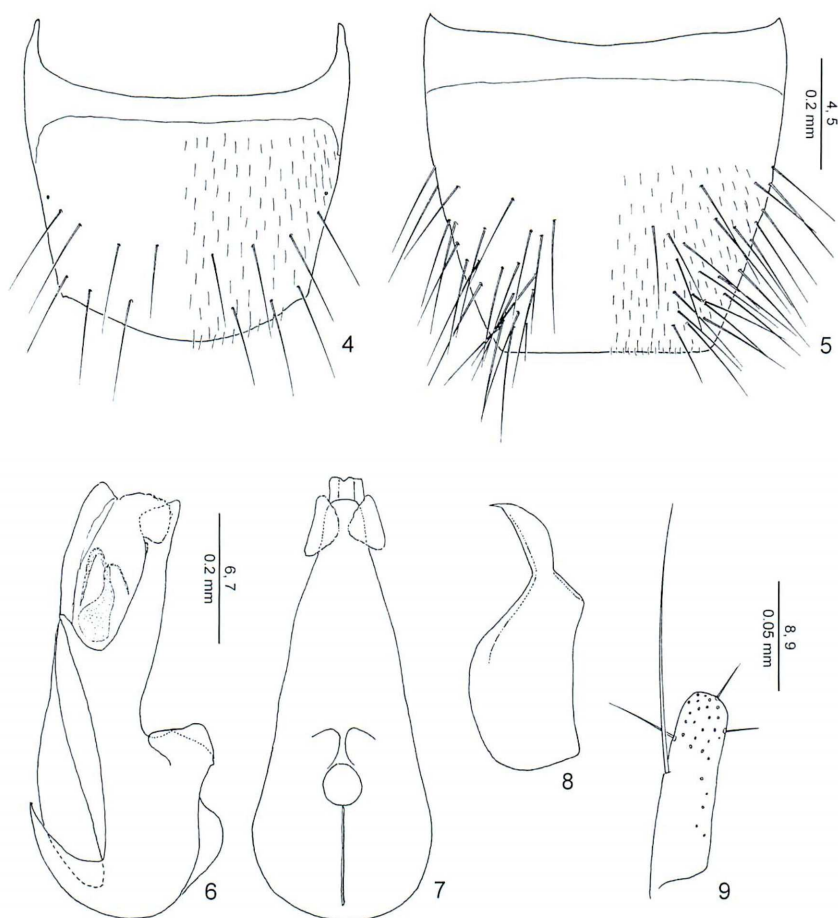
16.

Pronotum (Figs. 1–3) strongly transverse ($PW/PW=1.76-1.80$), widest just behind middle or just behind posterior corners, about 2.5 times as wide as head, largely emarginate anteriorly, with four macrosetae anterolaterally; surface moderately densely covered with short recumbent setae, and with weak isodiametric microsculpture. Elytra wide, much wider than pronotum, dilated apicad, widest at lateral corners; setation and sculpture as on pronotum.

Abdomen with tergites glossy, with fine transverse microsculpture; apical halves of tergites II–V moderately densely covered with long recumbent setae; apical margin of tergite VII with white palisade fringe; tergite VIII with seven (rarely eight) pairs of macrosetae.

Male. Pronotum with a pair of asetose depressions posteromesally; mesal area mat and more coarsely punctured than lateral areas. Tergite VIII (Fig. 4) rounded apically; sternite VIII (Fig. 5) truncated at apex, with about 25 pairs of macrosetae. Median lobe (Figs. 6, 7) with apical part slightly convex ventrally; copulatory piece as in Fig. 8; apical lobe of paramerite (Fig. 9) with a long basal seta, which is longer than apical lobe.

Female. Surfaces of head and pronotum less sculptured and more glossy than in male. Tergite VIII (Fig. 10) longer than the male tergite VIII, with apical margin rounded; sternite VIII (Fig. 11) with apical margin rounded, with 18 or 19 pairs of macrosetae. Spermatheca (Figs. 12, 13) with distal portion 2.5 times coiled at base; apical portion much shorter than proximal portion, dilated apicad, its inner wall densely wrinkled in apical half.



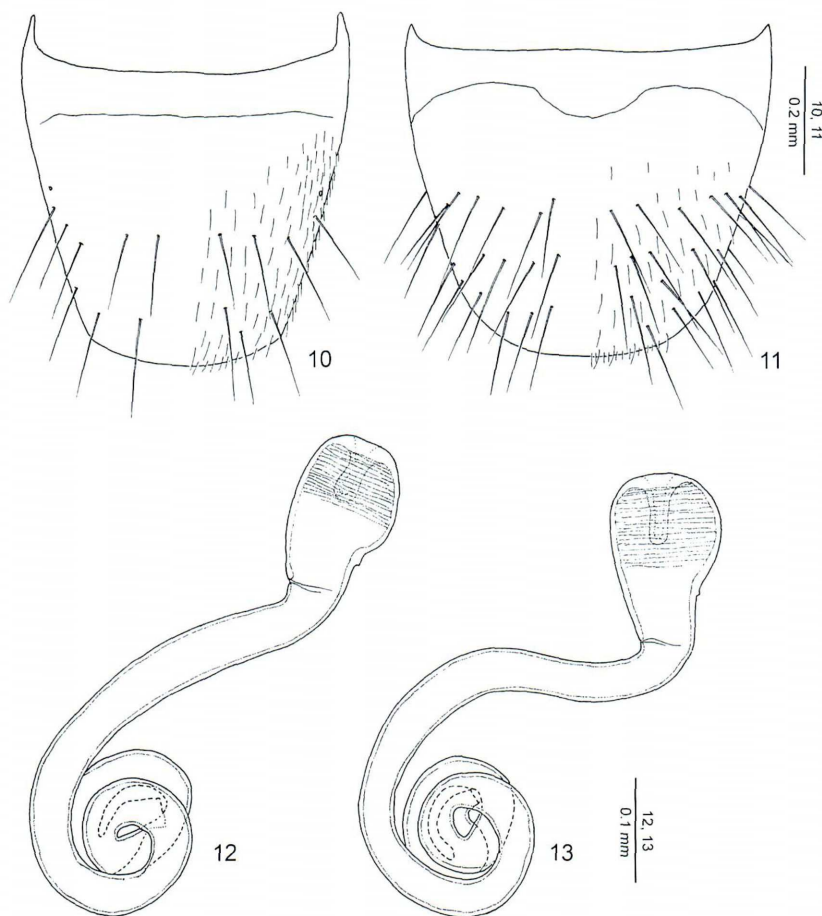
Figs. 4–9. *Goniusa carrorum* sp. nov., male. — 4, Tergite VIII; 5, sternite VIII; 6, median lobe, lateral view; 7, ditto, ventral view; 8, copulatory piece; 9, apical lobe of paramerite.

Measurements. Body length: ca. 2.9–3.0 mm; forebody length (from apex of clypeus to apices of elytra): ca. 1.40–1.41 mm; head length: 0.48–0.50 mm; head width: 0.58–0.60 mm; antennal length: 0.95–0.99 mm; pronotal length: 0.58–0.59 mm; pronotal width: 1.03–1.04 mm; elytral length: 0.65–0.66 mm; elytral width: 1.19–1.21 mm; foretibial length: 0.43–0.45 mm; midtibial length: 0.56–0.57 mm; hindtibial length: 0.61–0.68 mm.

***Goniusa alperti* KISTNER**

Goniusa alperti KISTNER, 1976, 89 (original description). — GUSAROV, 2003, 14 (redescription).

New records. CANADA: Alberta: 1 ♂, 1 ♀, “Twp. 20 Rge. 3 / W 5 Mer. Alberta /



Figs. 10–13. *Goniusa carrorum* sp. nov., female. — 10, Tergite VIII; 11, sternite VIII; 12, 13, spermathecae.

16. VI 1962/Lot 3, B. F. & J. L. Carr”; 3 ♀♀, same data but, 19–IV–1964; 1 ♂, 2 ♀♀, “Twp. 12 Rge. 1/W 5 Mer. Alberta/11. IV 1976/Lot 3, B. F. & J. L. Carr”.

Symbiotic host. *Formica obscuripes*, *F. ravidia* CREIGHTON, 1940, *F. oreas* WHEELER, 1903 (*F. rufa* group) (new host record from *F. oreas*). Determined by M. M.

要 約

丸山宗利・Jan KLIMASZEWSKI：カナダで見つかった好蟻性 *Goniusa* 属の1新種。—— *Goniusa* 属は新北区に分布する好蟻性ハネカクシの一群で、これまでにヤマアリ属を寄主とする2種のみが知られていた。今回、ケベック州のカナダ森林局に保存されている好蟻性ハネカクシの標本を調査した結果、ヤマアリの一種 *Formica obscuripes* の巣より採集された本属の1新種を見出

したので、ここに *G. carrorum* として記載命名した。本種は、より幅広の前胸背板、先端が丸まった腹部第8背板、および先端が裁断状になった腹部第8腹板により、他の2種から容易に区別できる。GUSAROV (2003) によって定義された腹部第8腹板の先端が広くえぐられるという属徴のひとつは、今回の新種には当てはまらないので、削除すべきである。また、*G. alperti* の追加記録を行うとともに、ヤマアリの1種 *F. oreas* を新寄主として記録した。

References

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